AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. (Currently Amended) A digital CDMA wireless communication system conforming to CDMA2000 standard comprising:

a plurality of transmitters, one or more of said transmitters comprising a base station baseband processor, a finite impulse response (FIR) filter, a pre-distortion phase equalizer and a digital-to-analog (DAC) converter;

a plurality of receivers, one or more of said receivers comprising an analog to digital (ADC) converter, a FIR filter, a phase equalizer and a receiver baseband processor; and

said receiver FIR filter being matched to said transmitter FIR filter and said receiver phase equalizer is matched to said pre-distortion phase equalizer.

2. (Original) A wireless CDMA communication system as in claim 1 wherein said transmitter FIR filter and said receiver FIR filter are constrained such that $|H_{tx}(z)H_{rx}(z)|$ has linear phase and odd symmetry about half the inter-chip frequency ($f_c/2$).

3. (Original) A digital CDMA wireless communication system as in claim 1 wherein the transmitter predistortion phase equalizer and said receiver phase equalizer are constrained to $H_{rxeq}(z)=H_{txeq}(z^{-1})$ in the z domain.

4. (Original) A digital CDMA wireless communication system as in claim 3 wherein each of the predistortion phase equalizer and the receiver phase equalizer has a transfer function of

$$H_{eq}(z) = \frac{b_0+b_1z^{-1}+b_2z^{-2}}{a_0+a_1z^{-1}+a_2z^{-2}}$$

where $a_0=b_2$, $a_1=b_1$, and $a_2=b_0$.

5. (Original) A wireless CDMA communication system as in claim 4 wherein said transmitter FIR filter and said receiver FIR filter are constrained such that

$|H_{tx}(z)H_{rx}(z)|$ has linear phase and odd symmetry about half the inter-chip frequency ($f_c/2$).

6. (Original) A digital CDMA wireless communication system as in claim 5 wherein the circuit response (H(z)) for the path from said base station baseband processor in said one or more transmitter to said receiver baseband processor has a linear phase and flat amplitude in-band such that ($H(z)=H_{tx}(z)H_{txeq}(z)H_{rx}(z)H_{rxeq}(z)$).

7. (Original) A digital CDMA wireless communication system as in claim 1 wherein the circuit response (H(z)) for the path from said base station baseband processor in said one or more transmitter to said receiver baseband processor has a linear phase and flat amplitude in-band such that (H(z)=Htx(z)Htxeq(z)Hrx(z)Hrxeq(z)).

8. (New) A wireless remote receiver conforming to CDMA2000 standard comprising:

an analog to digital (ADC) converter;

a receiver finite impulse response (FIR) filter;

a phase equalizer, and

a receiver base band processor,

wherein the FIR filter is matched to a transmitter FIR filter and the receiver phase equalizer is matched to a pre-distortion phase equalizer in a base station for reducing an Inter-Chip Interference caused by distortion introduced by the transmitter FIR filter and pre-distortion phase equalizer in the base station.

9. (New) The receiver as in claim 8 wherein said transmitter FIR filter and said receiver FIR filter are constrained such that $|H_{tx}(z)H_{rx}(z)|$ has linear phase and odd symmetry about half the inter-chip frequency ($f_c/2$).

10. (New) The receiver as in claim 8 wherein the pre-distortion phase equalizer and said receiver phase equalizer are constrained to $H_{rxeq}(z)=H_{txeq}(z^{-1})$ in the z domain.

11. (New) The receiver as in claim 8 wherein said transmitter FIR filter and said receiver FIR filter are constrained such that $|H_{tx}(z)H_{rx}(z)|$ has linear phase and odd symmetry about half the inter-chip frequency ($f_c/2$).